				PA-IDC
QUERY CONTROL FORM			RTIS ປ່ອ	SE ONLY
Application No. 09/ 385, 409	Prepared by	NPB.	Tracking Number	05883815
Examiner-GAU NELMS-2818	Date	2/26/04	Week Date	1/5/04
	No. of queries	1	IPW	

JACKET							
a. Serial No.	f. Foreign Priority	k. Print Claim(s)	p. PTO-1449				
b. Applicant(s)	g. Disclaimer	I. Print Fig.	q. PTOL-85b				
c. Continuing Data	h. Microfiche Appendix	m. Searched Column	r. Abstract				
d. PCT	i. Title	n. PTO-270/328	s. Sheets/Figs				
e. Domestic Priority	j. Claims Allowed	o. PTO-892	t. Other				

	<u>_</u>
SPECIFICATION	MESSAGE
a. Page Missing	1) pro-1449 frms (10 pages): Please either
b. Text Continuity	initial or line through citations. (copy provided
c. Holes through Data	for reference).
d. Other Missing Text	
e. Illegible Text	(2) there are hoo(2) claim 28's in the fext.
f. Duplicate Text	Deuse advise trenumber the claims in the
g. Brief Description	index of claims and text, IE necessary.
h. Sequence Listing	7.77 11 12
i. Appendix	
j. Amendments	
k. Other	
	V,
CLAIMS	/ hom/ayou
a. Claim(s) Missing	· / /
b. Improper Dependency	
e. Duplicate Numbers	
d. Incorrect Numbering	initials Onthis.
e. Index Disagrees	RESPONSE
f. Punctuation	
g. Amendments	
h. Bracketing	
i. Missing Text	
j. Duplicate Text	
k. Other	
	initials

Sheet 1 of 1 sheet(s)

U.S. Depart	J.S. Department of Commerce, Patent and Trademark Office						Serial No.		
(PTO Form 1449 modified)						51/CPI/L/B/	09/885,609		
		INFORMATION	DISCLOSURE ST	TATEMENT BY	Applicant		Confirmation	No.:	
APPLICAN	11		•		Mak, et al.	•	5337		
(Use sever	al sheet	s if necessary)	5 ff 2003	<u></u>	Filing Date	 9	Group		
(000 00707			ee R. Berry		June 20, 2		2818		
U.S. Paten		-			<u></u>		L		
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate		
	A1	6,139,700	10-31-2000	Kang, et al.	204	192.17	09-30-1998		
	A2								
-	A3								
	A4					:			
	A5								
	A6								
· · · · · · · · · · · · · · · · · · ·	A7								
	A8						7		
	A9								
	A10								
	A11			<u> </u>					
	A12								
	A13								
Foreign P	atent D	ocuments		<u>.,</u> _					
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translat YES	NO	
	B1								
	B2								
	ВЗ								
OTHER A	RT								
*Examiner Initial		Including Author	, Title, Date, Pertin	ent Pages, Etc.					
	C1	PCT Internation	nal Search Repor 03.	t from Internation	nal Applicati	on No. PCT/	US02/19481,	, Dated	
	C2								
	СЗ								
Examiner					Date Co	nsidered			
*EXAMINE citation if no	R: Initial ot in con	if reference consid formance and not o	ered, whether or no considered. Include	ot citation is in con e copy of this form	oformance with with your con	h MPEP 609; mmunication t	Draw line thro o applicant.	ugh	

						c	heet 1 of 2 sh	001/
II S. Depart	ment of	Commerce Patent	and Trademar	k Office	Docket No.		Serial No.	eeits
o.o. Bepartment of composition						1/CPI/L/B/	09/885,609	
SUPPLEME	ENTAL	INFORMATION DIS	ÇLOSURE ST	ATEMENT BY	Applicant		Confirmation	No.:
APPLICAN	Т	The The services	,		Mak, et al.		5337	
		"	<u></u>			<u> </u>	Group	
(Use severa		s if necessary)			Filing Date	200	2818	
			R. Berry		June 20, 2		2010	
U.S. Paten	t Docur						Eller Data II	
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate	
	A1	6,481,945	11-19-2002	Hasper, et al.	414	217	06-04-1999	
	A2	6,478,872	11-12-2002	Chae, et al.	117	88	12-20-1999	
	А3	6,447,607	09-10-2002	Soininen, et al.	117	200	12-27-2000	
	A4	6,231,672	05-15-2001	Choi, et al.	118	715	05-18-1999	
	A5	6,183,563	02-06-2001	Choi, et al.	118	715	05-18-1999	
	A6	2002/0134307	09-26-2002	Choi	118	715	11-30-2000	
	A7	2002/0108570	08-15-2002	Lindfors	118	715	04-16-2001	
	A8	2002/0094689	07-18-2002	Park	438	694	03-07-2002	
	A9	2002/0092471	07-18-2002	Kang, et al.	118	715	01-16-2002	
	A10	2002/0086106	07-04-2002	Park, et al.	427	248.1	11-07-2001	
	A11	2002/0041931	04-11-2002	Suntola, et al.	427	255.28	05-14-2001	
	A12	2002/0007790	01-24-2002	Park	118	715	05-03-2001	
	A13	2002/0000196	01-03-2002	Park	118	715	05-03-2001	
Foreign Pa	atent D	ocuments						
*Examiner		Document	Date	Country	Class	Subclass	Translati	ion
Initial		Number					YES	NC
	B1	EP 1 167 569 ✓	01-02-2002	EP	C23C	16/455		×
	B2	WO 02/08488 -	01-31-2002	WIPO	C23C	16/44	WWW SEC	×
	B3	WO 01/17692 ~	03-15-2001	WIPÖ	B05C	11/00	E	X
	B4	WO 99/65064 V	12-16-1999	WIPO	H01L	21/00	2893 2893	X
OTHER A	RT						KOM C	J ——
*Examiner Initial		Including Author, Tit	le, Date, Pertine	ent Pages, Etc.			H	
	C1							
	C2							
Examiner					Date Con	sidered		

		0 1	Tradomar	k Office	Docket No.		Serial No.	certs
U.S. Department of Commerce, 1 atent and 1 to commerce						1/CPI/L/B/	09/885.609	
(PTO Form 1449 modified) MAR 0 5 2003						.,0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
SUPPLEME	NTAL	INFORMATION DI	SCLOSURE ST	ATEMENT BY	Applicant		Confirmation	No.:
APPLICAN	Τ	O THE ST			Mak, et al.		5337	
l loo covers	ol choot	s if necessary)			Filing Date		Group	_
Use severa			e R. Berry		June 20, 20		2818	
J.S. Pateni					<u></u>	·		
Examiner	Docu	Document	Issue	Applicant(s)	Class	Subclass	Filing Date If	
nitial		Number	Date	Name			Appropriate	
	A14	2002/0052097	05-02-2002	Park	438	507	05-03-2001	
	A15	2001/0054377	12-27-2001	Lindfors, et al.	117	104	04-16-2001	
	A16	2001/0042523	11-22-2001	Kesala	122	6.6	05-14-2001	
	A17	2001/0014371	08-16-2001	Kilpi	427	255.28	12-27-2000	
	A18	2001/0013312	08-16-2001	Soininen, et al.	117	86	12-27-2000	
	A19	2001/0009140	07-26-2001	Bondestam, et al.	118	725	01-25-2001	
	A20					N:	RECEIVE	
	A21					800	50 0	
 	A22					3.0		
	A23							
	A24					9	<u>}</u>	
	A25							<u></u>
	A26							
Foreign P		ocuments						
*Examiner	T	Document	Date	Country	Class	Subclass	Transla	tion
Initial		Number					YES	NC
	B5							
	B6							<u> </u>
	B7							
OTHER A	RT							
*Examiner Initial		Including Author,	Title, Date, Pertin	ent Pages, Etc.				
	СЗ							
	C4							·
	C5			,	 			
Examiner		I if reference conside			Date Cor			

Sheet 2 of 2 sheet(s)

Please type λ ; los sign (** inside this box

JAN 2 4 2002

PTC/SB/08A (08-00)

Applied for use through 10/31/2002 OMB 0651-0031

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, persons are required a respond to a collection of information unless it displays a valid OMB control number

Under the F	Paperwork Reduction Act of	ק .כפפר	opersons are required as re	espond to a collection of information uni	less it displays a valid Olvid Conflot homber			
Substitute	Substitute for form 1449A/PTO			Complete if Known				
Substitute for form 17757				Application Number	09/885,609			
INFO	RMATION D	ISC	LOSURE	Filing Date	06/20/2001			
STATEMENT BY APPLICANT				First Named Inventor	Mak et al.			
				Group Art Unit	2812			
(use as many sheets	as nec	essary)	Examiner Name	unassigned			
Sheet	1	of	2	Attorney Docket Number	5351/AMI-00-12			

					U.S. PA	ATENT DOCUMEN	TS				
Examiner Cite Initials* No			U.S. Patent Doo Number	kind Code" (d known)		Name of Patentee or Applicant of Cited Document		roation of rument VYYY		ages. Columns, Lines. Where Relevant Passages or Relevant Figures Appear	
	CP	5,580,	380	T	Liu et	al.	12-03-19	96			
					<u> </u>		ļ				
				<u> </u>			<u> </u>				
					ļ		ļ				
					 						
				 						· ·	- 17
					†						
	+				<u> </u>						
							ļ				
		ļ	<u> </u>		ļ		ļ			•	
					 		 				
					 		ļ			<u></u>	
		 			1		 			,	
		 									
										·	
****		-		F	OREIGN	PATENT DOCUM	ENTS				
			Foreign Pater	nt Documer (BG		Name of Patentee or	Anglicant of		Publication of	Pages, Columns, Lines, Where Relevant	7
Examiner Initials	Cate No.	Office	Numbe		d Code ⁵ (nBown)	Cited Docume	enl		Document D-YYYY	Passages or Relevant Figures Appear	Ĺ
	ca	wo	98/51838		ļ						┦
		ļ			ļ			 			+-
		┼-	!		 			 		 	+
	 	-	 -		 			 			\dagger
		\vdash									T
		<u> </u>									
-											\perp
											\perp
		1						1		i	1

Examiner	Date
Signature	Considered

^{*}EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

^{*}Unique citation designation number **See attached Kinds of U.S. Patent Documents **Enter Office that issued the document, by the two-letter code (WIPO Standard ST 3) **For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the senal number of the patent document **Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST 16 if possible **Applicant is to place a check mark here if English language Translation is attached

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

Con	te if Known
Application Number	09/885,609
Filing Date	06/20/2001
First Named Inventor	Mak et al.
Group Art Unit	2812
Examiner Name	unassigned
Attorney Docket Number	5351/AMI-00-12

		NON-PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the	T ²
Examiner Initials*	Cite, No.	item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volurne-issue number(s), publisher, city and/or country where published.	Ľ.
		Kitagawa et al. Hydrogen-mediated low-temperature epitaxy of Si in plasma-enhanced	
	CR	chemical vapor deposition. Applied Surface Science, pp. 30-4 (2000).	
	_		
	_		
			_
		-1 C	
	-	t	
			_
		T. C.	
			
•			

Examiner	Date	
Signature	Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609 Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO. Assistant Commissioner for Patents, Washington, DC 20231.

¹Unique citation designation number ²Applicant is to place a check mark here if English language Translation is attached

DEC 03

TA TRADE

Sheet

Signature

PTO/SB/08A (08-00)

5351/AMI-00-12

Approved for use through 10/31/2002 OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

Complete if Known substitute for form 1449A/PTO 09/885,609 **Application Number** INFORMATION DISCLOSURE 06/20/2001 Filing Date STATEMENT BY APPLICANT **First Named Inventor** Mak et al. 2812 Group Art Unit (use as many sheets as necessary) Unassigned **Examiner Name**

Attorney Docket Number

				U.S. PA	ATENT DOCUMEN	18				
Examiner In-lials*	Cite No.	U.S. Patent Number	Kind Code ² (if known)		f Patentee or Applicant Cited Document	Date of Publi Cited Doc MM-DD-	ument		ages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
	AI	4.058,430		Suntol	a et al.	11-15-19	77		т ідатез Аррев.	
	+AJ	4,389,973		Suntol	a et al.	06-28-19	83			
	AK	4,413,022		Suntol	a et al.	11-01-19	B3			
	AL	4.767,494		Kobay	ashi et al.	08-30-19	88			
	AM	4,806,321		Nishiz	awa et al.	02-21-19	89			
	AN	4,840,921		Matsu	moto	06-20-19	89			
	AO	4,845,049		Sunak	awa	07-04-19	89			
	AP	4.859,627		Sunak	awa	08-22-19	89			
	AQ	4,861,417		Mochi	zuki et al.	08-29-19	89			
	AR	4,876,218		Pessa	et al.	10-24-19	89			
	AS	4,993,357		Scholz	<u> </u>	02-19-19	91			
	AT	5,082,798		Arimo	to	01-21-19	92			
	AU	5,130,269		Kitaha	ra et al.	07-14-19	92			
······	AV	5,166,092		Mochi	zuki et al.	11-24-19	1	-		
	AW	5,225.366		Yoder	· · · · · · · ·	07-06-19				
	AX	5,250,148		Nishiz	awa et al.	10-05-19				
	AY	5,256,244		Acker	man	10-26-19				
	AZ	5,270.247		Sakun	na et al.	12-14-19				
	BA	5,278,435		Van H	love et al.	01-11-19	-			
	ВВ	5,281,274		Yoder		01-25-19	94			
		·	F	OREIGN	PATENT DOCUM	ENTS				
		Foreign F	atent DocumentBG				Date of P	ublication of	Pages, Columns, Lines.	Τ.
Examiner Initials*	Cile No.1	Office ³ Nu		d Code⁵ knBown)	Name of Patentee or Cited Docum		Cited (Document D-YYYY	Where Relevant Passages or Relevant Figures Appear	
										+
	_			<u> </u>						\pm
										\pm
										+
				<u> </u>						†
									<u> </u>	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered include copy of this form with next communication to applicant.

Considered

Burden Hour Statement. This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office. Washington, DC 20231 DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231

¹Unique citation designation number ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3) ^{*}For Japunese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST ¹⁶ if possible. ⁵Applicant is to place a check mark here if English language Franslation is attached.

TENTA TRAC

PTO/SB/08A (08-00)

Approved for use through 10/31/2002 OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known **Application Number** 09/885,609 06/20/2001 Filing Date Alfred W. Mak First Named Inventor Group Art Unit 2812 Unassigned **Examiner Name** 5351/AMI-00-12 Attorney Docket Number

(use as many sheets as necessary) 4 of Sheet

				U.S. PA	ATENT DOCUMEN	TS			
Examiner Initials	Cite No.1	U.S. Patent	Document Find Code ² (if known)		of Patentee or Applicant f Cited Document	Date of Pub Cred Doo MM-DD-	tument YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
	BC	5,290,748		Knuut	tila et al.	03-01-19	94		
	BD	5,294,286	_	Nishiz	awa et al.	03-15-19	91		
	BE	5,300,186		Kitaha	ira et al.	04-05-19	91		
	BF	5,316,793		Wallad	ce et al.	05-31-19	94		
	BG	5,330,610		Eres e	et al.	07-19-19	94		
	BH.	5,335,324		Stall e	t al.	08-09-19	94		
	BI	5,338,389		Nishiz	awa et al.	08-16-19	- 1		
	BJ	5,374,570		Nasu	et al.	12-20-19	94		
	BK	5,395,791		Cheng	et al.	03-07-19	95		
	BL	5,443,033		Nishi2	awa et al.	08-22-19	95		
	ВМ	5,443,647		Aucoi	n et al.	08-22-19	95		
,	BN	5,458,084		Thom	e et al.	10-17-19	95		
	ВО	5,480,818		Matsu	moto et al.	01-02-19	96		
	BP	5,484,664		Kitiha	ra et al.	01-16-19	96		
	BQ	5,483,919		Yokoy	/ama et al.	01-16-19	96		
	BR	5,532,511		Nishia	awa et al.	07-02-19	96		
	BS	5,637,530		Gaine	s et al.	06-10-19	97		
	BT	5,693,139		Nishia	awa et al.	12-02-19	97		
	BU	5,705,224		Murot	a et al.	01-06-19	198		
	BV	5,711,811		Sunto	la et al.	01-27-19	98		
		<u> </u>		OREIGN	PATENT DOCUM	ENTS		-	
		Foreign Pa	tent DocumentBG	OKEIO	Ĭ		Date of Publication of	Pages, Columns, Lines,	Τ.
Examiner Initials*	Cite No.	- 	Kir	nd Code⁵ knBown)	Name of Patentee or Cited Docum		C ted Document MM-DD-YYYY	Where Relevant Passages or Relevant Figures Appear	T ⁴
	i								1_
	1								
	1								
i	i			T	i		i		
				1					
		 							

Examiner	Date	
Signature	Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO. Assistant Commissioner for Patents, Washington, DC 20231.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST 3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ³Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST 16 if possible. ³Applicant is to place a check mark here if English language Translation is attached

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

61	P	fu.	Substitute for form 1449A/P7	Ю
- [١ ء	201	INFORMATION	D
m,	' ગ	וספצ	STATEMENT B	Y

TA TRAD

FORMATION DISCLOSURE TATEMENT BY APPLICANT

(use as many sheets as necessary)

of Sheet

espend to a collection of information diffe	SEO IT GIODICA O TONO OND CONTROL HUMBER					
Complet	Complete if Known					
Application Number	09/885,609					
Filing Date	06/20/2001					
First Named Inventor	Alfred W. Mak					
Group Art Unit	2812					
Examiner Name	Unassigned					
Attorney Docket Number	5351/AMI-00-12					

					U.S. PA	ATENT DOCUMEN	TS				
Examiner Initia's	Cite No '		U.S. Patent Doo Number	ument Kind Code ² (if known)		of Patentee or Applicant of Cited Document	Date of Publ Cited Doc MM-DD-	ument		ages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
	BW	5,730,	802		Ishizu	mi et al.	03-24-199	98			
	BX	5,851,	849		Comiz	zoli et al.	12-22-199	98	_		
	BY	5,855,	680		Soinin	en et al.	01-05-19	1			
	BZ	5,879,	459		Gadgi	et al.	03-09-19				
	CA	5,916,	365		Sherm	nan	06-29-19				
	СВ	6,015.	590		Sunto	a et al.	01-18-20				
	cc	6,025,	627		Forbe	s et al.	02-15-20				
	CD	6,036,	773		Wang	et al.	03-14-20	ī			
	CE	6,043.	177		Falcor	ner et al.	03-28-20	1			
	CF	6,113,	977		Soinin	en et al.	09-05-20	00			
	CG	6,124,	158		Dauta	rtas et al.	09-26-20	00			
· · · · · · · · · · · · · · · · · · ·	CH	6,130,	147		Major	et al.	10-10-20	00			
	CI	6,200,	893		Sneh		03-12-20	01			
											_
					<u> </u>						_
					OREIGN	PATENT DOCUM	ENTS			· · · · · · · · · · · · · · · · · · ·	
Examiner In trais*	Cite No '	Office	Foreign Pater Number		d Code ¹ knBown)	Name of Patentee or Cited Docum		Cited 0	ublication of Document ID-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
	CI	EP	0799641		[Ι
	CK	PC	WO/91/05			-					I
	CL	PC	WO/99/01	595							T
_	СМ	PC	WO/99/29	924	1						T
	CN	PC	WO/00/15	865							I
							·	<u> </u>			\downarrow
								ļ		 	1
				· · · · · · · · · · · · · · · · · · ·	1			<u> </u>			1
										1	1

		· · · · · · · · · · · · · · · · · · ·
Examiner	Date	
Signature	Considered	

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

^{*}E>AMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant

¹Unique citation designation number ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST 3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ³Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST, 16 if possible. ³Applicant is to place a check mark here if English language Translation is attached

Please	tvoe a	olus	sian	(+)	ınside	this
ricasc						

PTO/SB/08A (08-00)

Approved for use through 10/31/2002 OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitu	ite for form 1449	B/PTO		Compl	ete if Known
R Substitute		+		Application Number	09/885,609
INFO	ORMATIO	N DISC	LOSURE	Filing Date	06/20/2001
POT STA	TEMENT	BY API	LOSURE PLICANT	First Named Inventor	Alfred W. Mak
HI GAN				Group Art Unit	2812
HR	(use as many s	sheets as ned	essary)	Examiner Name	Unknown
Sheet	4	of	4	Attorney Docket Number	5351/AMI-00-12

OTHER PRIC	OR ART -	NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite, No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Klaus et al. Atomically controlled growth of tungsten and tungsten nitride using	
	СО	sequential surface reacions, Applied Surface Science, pp. 479-491(2000).	
		·	

				
1	Examiner	Date		
	Signature	Considered		

Burden Hour Statement. This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. U.S. Patent and Trademark Office. Washington, DC 20231 DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

^{&#}x27;Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached

Sheet

of

5351 / AMI-00-12

Complete if Known Substitute for form 1449A/PTO **Application Number** Unassigned INFORMATION DISCLOSURE **Filing Date** Herewith Se 5 STATEMENT BY APPLICANT First Named Inventor Mak, Alfred Ö **Group Art Unit** Unassigned (use as many sheets as necessary) **Examiner Name** Unassigned

Attorney Docket Number

	T	U.S. Patent Documer	nt		Date of Publication of	Pages, Columns, Lines,
Examiner Initials*	Cite No. ³	Number	Kind Code ² (# known)	Name of Patentee or Applicant of Cited Document	Cited Document MM-DD-YYYY	Where Relevant Passages or Relevant Figures Appear
	AA	5,866,795		Wang et al.	02-02-1999	
	AB	6,071,808		Merchant et al.	06-06-2000	
	AC	6,084,302		Sandhu	07-04-2000	
	AD	6,140,237	T	Chan et al.	10-31-2000	
	AE	6,140,238	_ }	Kitch	10-31-2000	
	AF	6,042,652		Hyun	03-28-2000	
	AG	6,139,700		Kang	10-31-2000	
	AH	6,144,060		Park	11-07-2000	
-						
	1					
		· ·				

FOREIGN PATENT DOCUMENTS									
Examiner Initials*	Cite No.1	Foreign Patent Document				Date of Publication of	Pages, Columns, Lines.		
		Office ³	Number*	Kind Code [®] (# known)	Name of Patentee or Applicant of Cited Document	Cited Document MM-DD-YYYY	Where Relevant Passages or Relevant Figures Appear	₹*	
								\perp	
		·							
							,		
	\vdash								
	\vdash								
	\vdash				-				
							· · · · · · · · · · · · · · · · · · ·		
<u>L</u> .									

Examiner	1	Date	
Signature	 	Considered	

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WiPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

26. (Withdrawn) A method for forming a metal contact stacked barrier layer on a substrate surface, comprising:

exposing the substrate surface to a first reactive gas;

exposing the substrate surface to a second reactive gas;

sequentially repeating the exposure to the first and second reactive gases until an adhesion layer having a desired thickness is formed;

exposing the substrate surface to a third reactive gas;

exposing the substrate surface to a fourth reactive gas; and then

sequentially repeating the exposure to the third and fourth reactive gases until a barrier layer having a desired thickness is formed over the adhesion layer.

- 27. (Withdrawn) The method of claim 26, wherein the first reactive gas comprises a refractory metal-containing compound.
- 28. (Withdrawn) The method of claim 27, wherein the refractory metal-containing compound comprises TDMAT, TDEAT, TiCl₄, or combinations thereof.
- 28. (Withdrawn) The method of claim 27, wherein the second precursor gas comprises a reducing compound.
- 29. (Withdrawn) The method of claim 28, wherein the reducing compound comprises H₂, B₂H₆, SiH₄, NH₃, or combinations thereof.
- 30. (Withdrawn) The method of claim 27, wherein the third precursor gas comprises a refractory metal-containing compound.
- 31. (Withdrawn) The method of claim 30, wherein the refractory metal-containing compound comprises tungsten.
- 32. (Withdrawn) The method of claim 27, wherein the fourth comprises a reducing compound.